

# **2008 First International Conference on the Applications of Digital Information and Web Technologies**

**Ostrava, Czech Republic  
4 – 6 August 2008**

**Pages 1-295**



**IEEE Catalog Number: CFP0876E-PRT  
ISBN: 978-1-4244-2623-2**

# Table of Contents

<b>An Algorithm for Reusable Uninteresting Rules in Association Rule Mining .....</b>	<b>1</b>
<i>Pongsiam Thongtae and Samun Srisuk</i>	
<b>UChooBoost: Ensemble-Based Algorithm Using Extended Data Expression .....</b>	<b>7</b>
<i>Anastasiya Kolesnikova, Dong-Hun Seo and Won Don Lee</i>	
<b>Multi-Join Algorithm Utilizing Sublattice of a Minimal Number of Double Indices .....</b>	<b>12</b>
<i>Hanan Ahmed, Hosni Mahmoud, Abd Alla and Lilac Al-Safadi</i>	
<b>Analysis of Velocity Calculation Methods in Binary PSO on Maintenance Scheduling.....</b>	<b>19</b>
<i>Fatih Camci</i>	
<b>Automatic Detection of the Vertices of References By Polygonal Approximation Curves Discrete Closed Noisy Obtained From Using Segmented Contour Algorithm Alexander Kolesnikov, Pasi Fräntia.....</b>	<b>25</b>
<i>Fezani Mustapha, Remy Malgouyres and Batouche Mohamed</i>	
<b>A Low-Memory Streaming Algorithm for XSLT Processing Implemented in Xord Framework.....</b>	<b>31</b>
<i>Jana Dvorakova and Filip Zavoral</i>	
<b>Hybrid Canonical Genetic Algorithm and Steepest Descent Algorithm for Optimizing Likelihood Estimators of ARMA (1, 1) Model.....</b>	<b>37</b>
<i>Basa'd Ali Hussain</i>	
<b>Assessing the Relationship of Technology-Mediated Interaction To Student Learning in Web-Based E- Learning Environment.....</b>	<b>45</b>
<i>Ali Sher</i>	
<b>E-Visitor Information Management System(E-VIMS) Using Mykad.....</b>	<b>51</b>
<i>M.N. Noorhuzaimi, S. Jumaida, A. Noraziah and K. Huei Chen</i>	
<b>E-Commerce Privacy and Trust: Overview and Foundation .....</b>	<b>57</b>
<i>Abbe E. Forman</i>	
<b>Implementation of the Image Logging Server for Web Forensics.....</b>	<b>61</b>
<i>Seunghee Yoo, Yilhyeong Mun and Dongsub Cho</i>	
<b>APA Labs: An Experimental Web-Based Platform for the Retrieval and Analysis of News Articles .....</b>	<b>65</b>
<i>Wolfgang Kienreich, Elisabeth Lex and Christin Seifert</i>	
<b>A Study of AJAX Vulnerability in Web 2.0 Applications .....</b>	<b>70</b>
<i>Abdullah Bin Al-Tameem, P.Chittikala and Pit Pichappan</i>	
<b>Implementation of an Automated Documentation System With a Visual Data Flow Programming Language.....</b>	<b>75</b>
<i>Maija Marttila-Kontio and Marko Hassinen</i>	
<b>Performing Operations on Graph Through Multimodal Interface: An Agent Based Architecture .....</b>	<b>81</b>
<i>N S Sreekanth, Supriya N Pal, Girish K G, Arunjith a and N.K Narayanan</i>	
<b>Query Graph Visualizer: A Visual Collaborative Querying System.....</b>	<b>85</b>
<i>Dion Hoe-Lian Goh, Alton Y.K. Chua, Chei Sian Lee and Brendan Luyt</i>	
<b>An Arabic Retrieval System With Native Language Rather Than SQL Queries .....</b>	<b>91</b>
<i>Mohammed Otair, Raid Al-Sardi and Salah Al-Gialain</i>	
<b>Comparison Between Documentbased, Termbased and Hybrid Partitioning .....</b>	<b>97</b>
<i>Ahmad Abusukhon, Michael P. Oakes, Mohammad Talib and Ayman M. Abdalla</i>	
<b>The Search Experience Using Condition Formulas Based on the Cellular Model.....</b>	<b>103</b>
<i>Toshio Kodama, Toshiyasu L. Kumii and Yoichi Seki</i>	
<b>A Music Recommendation System Based on Personal Preference Analysis .....</b>	<b>109</b>
<i>Kunsu Kim, Donghoon Lee, Tae-Bok Yoon and Jee-Hyong Lee</i>	

# Table of Contents

<b>Vector Space Model for Arabic Information Retrieval -Application To "Hadith"Indexing.....</b>	<b>114</b>
<i>Fouzi Harrag, Aboubekeur Hamdi-Cherif and Eyas El-Qawasmeh</i>	
<b>An Approach To a Cloud Computing Network .....</b>	<b>120</b>
<i>Francesco Maria Aymerich, Gianni Fenu and Simone Surcis</i>	
<b>Virtual Social Networks Online and Mobile Systems.....</b>	<b>126</b>
<i>Maytham Safar, Hussein Sawwan, Mahmoud Taha and Talal Al-Fadhli</i>	
<b>Payload Content Based Network Anomaly Detection .....</b>	<b>134</b>
<i>Sandeep A. Thorat, Amit K. Khandelwal, Bezawada Bruhadeshwar and K. Kishore</i>	
<b>MDSAP Simulation Using Tinyos and Hospital Application Modeling.....</b>	<b>140</b>
<i>Samir El-Haddad, Marc Girod Genet, Bachar El-Hassan and Dima El-Nabbouch</i>	
<b>Usage of MCA8 Software for Improving Reliability of Electrical Networks .....</b>	<b>146</b>
<i>Jiri Dvorsky, Zdenek Hradilek and Petr Moldrik</i>	
<b>Mavie: A Mobile Agents View Synchronization System .....</b>	<b>152</b>
<i>Jalel Akaichi and Wided Oueslati</i>	
<b>Experimental Performance Evaluation of Wireless 802.11b Networks .....</b>	<b>158</b>
<i>Asma Bait Fadhah, Athra' Al-Lawati, Sara Al-Maskari, Abderezak Touzene and Ahmed Al-Kindi</i>	
<b>An Unstructured P2P Network Model for Efficient Resource Discovery.....</b>	<b>163</b>
<i>Xin Sun, Yong Tian, Yushu Liu and Yue He</i>	
<b>NEWER: A Neuro Fuzzy Web Recommendation System .....</b>	<b>169</b>
<i>Giovanna Castellano, Anna Maria Fanelli and Maria Alessandra Torsello</i>	
<b>Hierarchical Intra-Context Handoff Awareness Approach To Personal Recommender Systems: A Mobile DTV Case Study .....</b>	<b>175</b>
<i>Leandro Vaguetti and Paulo R. L. Gondim</i>	
<b>Modelling Recommendations for Lifelong Learning.....</b>	<b>181</b>
<i>Olga C. Santos and Jesus G. Boticario</i>	
<b>Enhancing Collaborative Filtering By Frequent Usage Patterns .....</b>	<b>187</b>
<i>Ilham Essilmani, Armelle Bran and Anne Boyer</i>	
<b>A Unified Approach of Factor Models and Neighbor Based Methods for Large Recommender Systems .....</b>	<b>193</b>
<i>Gabor Takacs, Istvan Pilaszy, Bottyan Nemeth and Domonkos Tikk</i>	
<b>Collaborative Filtering Inspired From Language Modeling.....</b>	<b>199</b>
<i>Geoffray Bonnin, Armelle Brun and Anne Boyer</i>	
<b>Contextualized Query Sampling To Discover Semantic Resource Descriptions on Theweb .....</b>	<b>205</b>
<i>Jason J. Jung</i>	
<b>DYNIQX: A Novel Meta-Search Engine for Metadata Based Cross Search.....</b>	<b>211</b>
<i>Jianhan Zhu, Dawei Song, Marc Eisenstadt, Cristi Barladeanu and Stefan Ruger</i>	
<b>Using an Interactive Interface To Support Web Search for Improving User Experience .....</b>	<b>217</b>
<i>Jianquan Liu, Hanxiong Chen, Kazutaka Furuse and Nobuo Ohbo</i>	
<b>XML Components Ranking : Which Relevant Ranking Criteria ? Which Relevant Criteria Merging ? .....</b>	<b>223</b>
<i>Faiza Abbaci and Pascal Francaq</i>	
<b>User Interface Design Practices in Simple Single Page Web Applications .....</b>	<b>230</b>
<i>Jiri Tesarik, Ladislav Dolezal and Christian Kollmann</i>	
<b>Applying Question Classification To Yahoo! Answers.....</b>	<b>236</b>
<i>Mohan John Blooma, Dion Hoe-Lian Goh, Alton Yeow Kuan Chua and Zhiquan Ling</i>	
<b>The Role of Cultural Factors in Software Projects Development.....</b>	<b>242</b>
<i>Moh'd M. I. Tarawneh, Haroon AL-Tarawneh and Asim Elsheikh</i>	

# Table of Contents

<b>Management Rules Optimization for Software Development Based on System Dynamics and Swarm Intelligence .....</b>	<b>247</b>
<i>Jiann-Horng Lin and Hsiu-Cheng Liu</i>	
<b>Software Development Projects: An Investigation Into the Factors That Affect Software Project Success/ Failure in Jordanian Firms.....</b>	<b>253</b>
<i>Moh'd M. I. Tarawneh, Haroon AL-Tarawneh and Asim Elsheikh</i>	
<b>An Evolutionary Multiobjective Approach for the Component Selection Problem .....</b>	<b>259</b>
<i>Andreea Vescan</i>	
<b>Successful Requirement Elicitation By Combining Requirement Engineering Techniques.....</b>	<b>265</b>
<i>Deepti Mishra, Alok Mishra and Ali Yazici</i>	
<b>Incremental Maintenance of Horizontal View Using PIVOT Operation and Differential Files in Relational DBMSS.....</b>	<b>271</b>
<i>Sung-Hyun Shin, Jinho Kim, Yang-Sae Moon and Sang-Wook Kim</i>	
<b>Watermarking Relational Database Systems .....</b>	<b>277</b>
<i>Ashraf Odeh and Ali Al-Haj</i>	
<b>Storage Structures for Efficient Query Processing in a Stock Recommendation System .....</b>	<b>282</b>
<i>You-Min Ha, Sang-Wook Kim, Sanghyun Park and Seung-Hwan Lim</i>	
<b>JCAM: the Joined Clustered Access Method.....</b>	<b>288</b>
<i>Azzam Sleit , Wesam AlMobaideen , Mohamad Smadi and Mohammed Qatawneh</i>	
<b>A Set of Mapping Rules E/R and Relational Schema Database Towards an Ontology.....</b>	<b>296</b>
<i>H.Belhadef, N.Ouafek and M.K.Kholladi</i>	
<b>Using Nonnegative Matrix Factorization and Concept Lattice Reduction To Visualizing Data .....</b>	<b>303</b>
<i>Vaclav Snasel, Hussam M. Dahwa Abdulla and Martin Polovincak</i>	
<b>Visualizing a Multi-Dimensional Data Set in a Lower Dimensional Space .....</b>	<b>309</b>
<i>Dong-Hun Seo and Won Don Lee</i>	
<b>Using Clustering to Improve WLZ77 Compression .....</b>	<b>315</b>
<i>Jan Platos, Jiri Dvorsky and Jan Martinovic</i>	
<b>A Casestudy of Data Models in Data Warehousing .....</b>	<b>321</b>
<i>Deepti Mishra, Ali Yazici and Beril Pinar Basaran</i>	
<b>The New Statistical Compression Method: Multistream Compression .....</b>	<b>327</b>
<i>Jiri Kochanek, Jan Lansky, Petr Uzel, and Michal . Zemlicka</i>	
<b>Financial Informatics Enterprise and Audit Risk in Developing Economy .....</b>	<b>333</b>
<i>Ezendu Ariwa and Kingsley Eseimokumoh</i>	
<b>Dedicated Hardware Architecture for Cycle Crossover Operation .....</b>	<b>345</b>
<i>Masaya Yoshikawa, Kentaro Otsuka and Hidekazu Terai</i>	
<b>Architectures for Small Mobile Communication Devices and Performance Analyses.....</b>	<b>349</b>
<i>Haluk Gumuskaya, Ahmet V. Gurel and Mustafa V. Nural</i>	
<b>Solving Multi-Sensor Problem With a New Approach.....</b>	<b>355</b>
<i>Chi-Hwa Song, Jun Wu, Dong-Hun Seo and Won Don Lee</i>	
<b>System Memory Monitoring Through Windows Application Programming Interface .....</b>	<b>361</b>
<i>A. Noraziah, A.S. Hafizulrahim, R.M. Ramiza, S.Junaida and M.N. Noorhuzaimi</i>	
<b>A New Classifier Applied To Biological Early Warning Systems for Toxicity Detection.....</b>	<b>367</b>
<i>Yingrong Li, Dong-Hun Seo and Won Don Lee</i>	
<b>Navigation of Robotic Wheelchair Based on Fuzzy Control.....</b>	<b>373</b>
<i>Khalid A. Al-Shalfan</i>	

# Table of Contents

<b>The Recognition of 2D Partially Occluded Objects Using Curve Moment Invariants .....</b>	<b>379</b>
<i>Kang Lichun, Lim Kah Bin and Yao Jin</i>	
<b>A User Adaptive Cooking Navigation System Using Ubiquitous Sensing Environment .....</b>	<b>385</b>
<i>Kenzaburo MIYAWAKI and Mutsuo SANO</i>	
<b>A Histogram Based Speaker Identification Technique .....</b>	<b>391</b>
<i>Azzam Sleit, Sami Serhan and Loai Nemir</i>	
<b>Software Video Stabilization in a Fixed Point Arithmetic .....</b>	<b>396</b>
<i>Martinsky Ondrej, Zboril Frantisek and Drahansky Martin</i>	
<b>Approximating Images Using Minimum Bounding Rectangles .....</b>	<b>401</b>
<i>Azzam Sleit, Imad Salah and Rahmeh Jabay</i>	
<b>Named Entity Recognition Based on a Hidden Markov Model in Part-Of-Speech Tagging .....</b>	<b>404</b>
<i>Ryohei Ageishi and Takao MIURA</i>	
<b>Reputation-Based Methods for Building Secure P2P Networks.....</b>	<b>410</b>
<i>Miroslav Novotny and Filip Zavoral</i>	
<b>Improving Wireless Sensor Network Efficiency and Adaptability Through an SOS Server Agent .....</b>	<b>416</b>
<i>Nafaa Jabeur, James D. McCarthy and Phil A. Graniero</i>	
<b>Book Embedding of the K-Ary Hypercube .....</b>	<b>422</b>
<i>Said Bettayeb and David Hoelzeman</i>	
<b>Optimizing the Performance of Multi-Homed Networks.....</b>	<b>429</b>
<i>Hikmat Farhat</i>	
<b>A Survey of Architecture and Node Deployment in Wireless Sensor Network.....</b>	<b>433</b>
<i>Pradnya Gajbhiye and Anjali Mahajan</i>	
<b>A Review of Current Routing Protocols for Ad Hoc Underwater Acoustic Networks.....</b>	<b>438</b>
<i>Omar O. Aldawibi</i>	
<b>Reliability of Network Connectivity .....</b>	<b>442</b>
<i>Ibrahim M. Obeidat and Simon Y. Berkovich</i>	
<b>The Performance of Integrated Wired Networks With Wireless Networks.....</b>	<b>449</b>
<i>Amaal Al-Amawi, Khalid Khanfar and Eyas El-Qawasmeh</i>	
<b>Comparison Neural Networks Models for Short Term Forecasting of Natural Gas Consumption in Istanbul.....</b>	<b>455</b>
<i>Recep Kizilaslan and Bekir Karlik</i>	
<b>Automatic Recognition of Retinopathy Diseases By Using Wavelet Based Neural Network.....</b>	<b>461</b>
<i>Fatma Demirezen Yagmur, Bekir Karlik and Ali Okatan</i>	
<b>Distributing Rewards By Strategic Knowledge Based on Nash-Q Learning.....</b>	<b>465</b>
<i>Kazuo IGOSHI and</i>	
<b>Towards Data Warehouse Business Quality Through Requirements Elicitation .....</b>	<b>471</b>
<i>Anjana Gosain and Jaspreeti Singh</i>	
<b>SOA Compliant Fipa Agent Communication Language.....</b>	<b>477</b>
<i>M. Atif Nazir Raja, H. Farooq Ahmad and Hiroki Suguri</i>	
<b>Recognition of Arabic Sign Language (ARSL) Using Recurrent Neural Networks .....</b>	<b>485</b>
<i>Manar Maraqa and Raed Abu-Zaiter</i>	
<b>Jini Versus CORBA for Distributed Systems.....</b>	<b>489</b>
<i>Fatma M. El-Shehri, Samhaa R.El-Beltagy and Reem Bahgat</i>	
<b>The Reputation System for Distributed Data Source Environment.....</b>	<b>495</b>
<i>Roman Spanek and Martin Rimnac</i>	

# Table of Contents

<b>Achieving Data Warehouse Quality Using GDI Approach</b> .....	<b>501</b>
<i>Anjana Gosain and Jaspreeti Singh</i>	
<b>A Telecardiology System Design With Real-Time Diagnosis and Teleconsultation</b> .....	<b>507</b>
<i>Nazife OZEN and Bekir KARLIK</i>	
<b>Social Communities Detection in Enron Corpus Using H-Index</b> .....	<b>514</b>
<i>Anton Timofietev, Vaclav Sna.sel and Jiri Dvorsky</i>	
<b>Signing the Document Content Is Not Enough: A New Attack To Digital Signature</b> .....	<b>520</b>
<i>Francesco Buccafurri, Gianluca Caminiti and Gianluca Lax</i>	
<b>DWT-SVD Based Dual Watermarking Scheme</b> .....	<b>526</b>
<i>Gaurav Bhatnagar, Balasubramanian Raman and K. Swaminathan</i>	
<b>Optimized Dwt-Based Image Watermarking</b> .....	<b>532</b>
<i>Aymen Abu-Errub and Ali Al-Haj</i>	
<b>R.A.R.E.: Round-About Risk Evaluation</b> .....	<b>538</b>
<i>Abbe E. Forman</i>	
<b>A Splog Filtering Method Based on String Copy Detection</b> .....	<b>543</b>
<i>Takaharu Takeda and Atsuhiko Takasu</i>	
<b>Non-Intrusive Qos Monitoring and Analysis for Self-Healing Web Services</b> .....	<b>549</b>
<i>Riadh Ben Halima, Karim Guennoun, Khalil Drira and Mohamed Jmaiel</i>	
<b>An Approach for Semantic Query Mapping on the Heterogeneous Web Data Sources</b> .....	<b>555</b>
<i>Abdolreza Hajmoosaei and Sameem Abdul Kareem</i>	
<b>User-Based Meta-Search With the Co-Citation Graph</b> .....	<b>563</b>
<i>Amir Hosein Keyhanipour, Maryam Piroozmand, Ali Mohammad Zareh Bidoki and Kambiz Badie</i>	
<b>A Scalable Method To Protect From IP Spoofing</b> .....	<b>569</b>
<i>Hikmat Farhat</i>	
<b>Disclosure Prevention in XML</b> .....	<b>573</b>
<i>Noha N. Mohy and Mohamed E. El-Sharkawi</i>	
<b>Realizing Process Interoperability Using E-Mail Communication</b> .....	<b>579</b>
<i>Thomas Burkhart and Dirk Werth</i>	